

REMARKS

Claims 1-12 are pending in the present application. By this Amendment, previously presented claim 11 has been amended. Applicants respectfully request reconsideration of the present claims in view of the foregoing amendment and the following remarks.

I. Prior Art Rejections:

Rejection of Previously Presented Claims 1-12 Under 35 U.S.C. §103(a) In View of U.S. Patent No. 6,890,889 (Wichert) Further In View of U.S. Patent Application Publication No. 2005/0202972 (Piper) and U.S. Patent No. 4,331,490 (Palgrave)

Previously presented claims 1-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable in view of U.S. Patent No. 6,890,889 issued to Wichert et al. (hereinafter, “Wichert” in combination with U.S. Patent Application Publication No. 2005/0202972 to Piper et al. (hereinafter, “Piper”) and U.S. Patent No. 4,331,490 issued to Palgrave et al. (hereinafter, “Palgrave”). This rejection is respectfully traversed for (i) at least the reasons presented in Applicants’ February 03, 2009 Reply to the October 03, 2008 non-final Office Action (hereinafter, “Applicants’ February 03, 2009 Reply”), and (ii) the reasons provided below.

As discussed in Applicants’ February 03, 2009 Reply, the teaching of Wichert is directed to mesotrione formulations comprising (i) mesotrione and (ii) urea ammonium nitrate or ammonium sulfate fertilizer. When urea ammonium nitrate is present in the disclosed formulations, urea ammonium nitrate is present in an amount of about 0.5 to about 5% on a volume to volume basis based on a total volume of a given formulation (i.e., components A, B, C and D as disclosed in Wichert).

One skilled in the art, given the teaching of Wichert, would have been directed by the teaching of Wichert to formulate mesotrione compositions having a weight ratio of ammonium nitrate salt to mesotrione much higher than Applicants’ recited weight ratio of ionic nitrate salt additive (i.e., component c) to at least one pesticide (i.e., component b). Given the broadest interpretation of Wichert and the formulations disclosed therein, one skilled in the art would calculate a minimum ratio of ammonium nitrate salt to mesotrione as shown below.

In column 1, lines 63-67, the teaching of Wichert discloses:

In a typical formulation, based on a 100 gallon (380 l) sample of the formulation, about 3 ounces (85 g) of mesotrione will be utilized for post-emergent use, and about 5-6 ounces (142-170 g) for preemergent usage.

Given this text describing a typical formulation, a specific gravity of 1.28 for an urea ammonium nitrate (UAN) solution, and a weight percent of 37% for the amount of ammonium nitrate in UAN solution¹, the minimum ratio of ammonium nitrate salt to mesotrione in a typical Wichert formulation would be:

$$\begin{aligned} 100 \text{ gallons} &= 380 \text{ liters} = 380 \text{ kg} = 380,000 \text{ g}^2 \\ (0.005)(380 \text{ liters}) &= 1.9 \text{ liters UAN} = 2.43 \text{ kg UAN } ((1.9) \times (1.28 \text{ specific gravity})) \\ &= 0.900 \text{ kg ammonium nitrate (AN)} ((0.900) \times (0.37)) = 900 \text{ g AN} \\ (900 \text{ g AN}) / (85 \text{ g mesotrione}) &= 10.6:1 \end{aligned}$$

Even considering what appears to be the most concentrated formulation disclosed in the teaching of Wichert, one skilled in the art would still be directed by the teaching of Wichert to formulate mesotrione compositions having a weight ratio of ammonium nitrate salt to mesotrione much higher than Applicants' recited weight ratio of ionic nitrate salt additive (i.e., component c) to at least one pesticide (i.e., component b). In column 1, lines 61-63, the teaching of Wichert discloses:

Such amounts would ordinarily vary from about 3 ounces (85 g) in 5 gallons (19 l) to about 3 ounces (85 g) in 30 gallons (114 l).

Given this text, a specific gravity of 1.28 for an UAN solution, and a weight percent of 37% for the amount of ammonium nitrate in UAN solution, the minimum ratio of ammonium nitrate salt to mesotrione in this Wichert formulation would be:

$$\begin{aligned} 5 \text{ gallons} &= 19 \text{ liters} = 19 \text{ kg} = 19,000 \text{ g} \\ (0.005)(19 \text{ liters}) &= 0.095 \text{ liters UAN} = 0.122 \text{ kg UAN } ((0.095) \times (1.28)) \end{aligned}$$

¹ See the attached MSDS for various UAN solutions.

² Applicants are using a specific gravity of 1.0 in the calculations even though the actual specific gravity of a given formulation is typically less than 1.0 given that the specific gravity of the crop oil concentrate or the methylated seed oil component is less than or equal to about 0.90. See the attached MSDSs for exemplary crop oil concentrate and methylated seed oil.

$$= 0.045 \text{ kg ammonium nitrate (AN)} ((0.122) \times (0.37)) = 45 \text{ g AN} \\ (45 \text{ g AN}) / (85 \text{ g mesotrione}) = 0.53:1.$$

Given the broadest interpretation of the teaching of Wichert, Applicants respectfully submit that one skilled in the art would not have been motivated to utilize a ratio of ionic nitrate salt additive (e.g., ammonium nitrate) to pesticide(s) (e.g., mesotrione) of less than or equal to 0.3:1 as recited in Applicants' claimed invention. Further, Applicants respectfully submit that the teaching of Wichert, alone or in combination with the art of record and a general understanding of the state of the art, would not have suggested to one skilled in the art the benefits of utilizing an ionic nitrate salt additive in a pesticide concentrate at a ratio of less than or equal to 0.3:1 (i.e., ionic nitrate salt additive to pesticide) as recited in Applicants' claimed invention.

Even if (1) the proposed combination of the teaching of Wichert with the teaching of Piper and the teaching of Palgrave were deemed proper (and for at least the reasons given in Applicants' February 03, 2009 Reply, Applicants submit that it is improper) and (2) the proposed combination of the teaching of Wichert with the teaching of Piper and the teaching of Palgrave represented a proper combined teaching of prior art to the present invention (which for the reasons given below, it does not), the proposed combination of the teaching of Wichert with the teaching of Piper and the teaching of Palgrave would still fail to teach or suggest an ionic nitrate salt additive in a pesticide concentrate at a ratio of less than or equal to 0.3:1 (i.e., ionic nitrate salt additive to pesticide) as recited in Applicants' claimed invention. Any combination of the teaching of Wichert with the teaching of Piper and the teaching of Palgrave would not alter the disclosed ratio of components (i.e., pesticide, UAN solution, and AN content relative to diluent) suggested in the teaching of Wichert. For at least this reason, the proposed combination of the teaching of Wichert with the teaching of Piper and the teaching of Palgrave, even if proper, fails to make obvious Applicants' claimed invention.

It should be further noted that the teaching of Piper is not prior art to Applicants' claimed invention under 35 U.S.C. §102(e) given that (1) the present application was filed after November 29, 1999, (2) the present application and Piper were, at the time of the present invention, owned by the same person/entity (i.e., Syngenta Crop Protection, Inc.) or subject to an

obligation of assignment to the same person/entity (i.e., Syngenta Crop Protection, Inc.), and (3) the American Inventors Protection Act (AIPA) disqualified any previous 102(e) art that met conditions (1) and (2) (e.g., Piper).³ See, for example, the Manual Of Patent Examination Procedure (MPEP) §706.02(l)(1), in the subsection entitled “I. COMMON OWNERSHIP OR ASSIGNEE PRIOR ART EXCLUSION UNDER 35 U.S.C. 103(c).” For this reason, withdrawal of this rejection is also respectfully requested.

Also, given that the teaching of Palgrave is directed to methods of increasing the concentration of an inorganic salt, such as ammonium nitrate, within a slurry composition, Applicants respectfully submit that if one skilled in the art would have been motivated to combine the teaching of Wichert with the teaching of Palgrave, one skilled in the art would have been motivated to increase the content of ammonium nitrate (i.e., the UAN solution) within the disclosed formulations in the teaching of Wichert, not try to minimize the ratio of ammonium nitrate to mesotrione as is suggested in the April 29, 2009 final Office Action.

For at least the reasons given above, it is respectfully submitted that the proposed combination of the teaching of Wichert, the teaching of Piper and the teaching of Palgrave is not prior art to the present invention. Further, for at least the reasons given above, it is respectfully submitted that the proposed combination of the teaching of Wichert, the teaching of Piper and the teaching of Palgrave, even if proper, fails to make obvious Applicants’ claimed invention as embodied in independent claim 1. Since claims 2-12 depend from independent claim 1 and recite further claim features, the proposed combination of the teaching of Wichert, the teaching of Piper and the teaching of Palgrave also fails to make obvious Applicants’ claimed invention as embodied in dependent claims 2-12. Accordingly, withdrawal of this rejection is respectfully requested.

II. Conclusion:

For at least the reasons given above, Applicants submit that claims 1-12 define

³ Note that the first publication date of Piper was the publication date of the corresponding PCT, namely, December 24, 2003. This publication date is after the priority date of the present application, namely, December 05, 2003. Further, Applicants’ priority document, provisional application serial number 60/527,555, filed on December 05, 2003, is substantially similar, if not identical, to Applicants’ present application.

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patentable subject matter. Accordingly, Applicants respectfully request allowance of these claims.

Should Examiner Brown believe that further action is necessary to place the application in better condition for allowance, Examiner Brown is respectfully requested to contact Applicants' representative at the telephone number listed below.

No additional fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, to Deposit Account No. 503025.

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